

240245US3 CONT
Application Serial No.: 10/619,567
Yasuji HIRAMATSU, et al.

REMARKS

Favorable consideration of this application as presently amended is respectfully requested.

Claims 5-19 are presently active in this case. Claims 1-4 have been canceled without prejudice or disclaimer and Claims 5-19 are newly added.

The newly added claims are supported by the originally filed specification, including the written description and the figures, as well as the originally filed claims. The Applicants submit that no new matter has been entered.

According to the present invention, the ceramic heater comprises a ceramic substrate having a resistance heating element and a straight notch, as recited in Claim 5.

By way of illustration and not limitation, in a ceramic heater having a ceramic substrate in a disc form, the ceramic substrate, when it is not fixed, is rotated by an impact caused by transferring a wafer or cooling of the ceramic substrate. The resistance heating element is connected to an external terminal and a wiring for power supply. The rotation may cause a problem that external terminals and wirings are detached. According to the present invention, the ceramic substrate has a straight notch, which may be formed by cutting a part of a side face of the ceramic substrate in a straight manner. By contacting the notch with a rotation-blocking pin, the ceramic substrate can be prevented from rotating. The above problem is thus solved.

A ceramic substrate with a through hole as shown in Figure 13 or with a notch in a U-shape, into which a fixing member is fitted, is likely to have a crack caused by a thermal

240245US3 CONT

Application Serial No.: 10/619,567
Yasuji HIRAMATSU, et al.

stress. For example, as shown in the attached Appendix A, the strength of the portions between the through holes and the side face of the ceramic substrate is low, and fixing of the substrate by the insertion of fixing members may cause a fracture of the substrate in the portions indicated by circles. The ceramic substrate according to the present invention is free from such fractures.

The rejection of the claims in the parent application Ser. No. 10/009,480 under 35 U.S.C. 102(b) as being anticipated by Nobori et al. (U.S. Patent No. 5,616,024) is respectfully traversed.

The ceramic heater according to the Nobori et al. reference includes a ceramic substrate. As shown in Figure 26, a nearly circular-shaped electrode 86 is embedded, and cutouts 86a are formed on the electrode 86. Holes 87 for supporting a long lift pin are bored in the ceramic substrate 72 (column 27, lines 8-18). However, they are not straight notches.

The holes 87 bored in the ceramic substrate 72 are not straight, but rectangular. The Nobori et al. reference fails to disclose straight notches. Therefore, the ceramic heater according to the present invention is different in constitution from the ceramic heater according to the Nobori et al. reference.

Accordingly, the ceramic heater recited in Claim 5 is not anticipated by and not obvious in view of the Nobori et al. reference. Thus, the Applicants submit that Claim 5 is in condition for allowance, and that dependent Claims 6-14 are also allowable.

240245US3 CONT
Application Serial No.: 10/619,567
Yasuji HIRAMATSU, et al.

Claim 15 is substantially the same as originally filed Claim 4 in independent form.

The Applicants submit that Claim 15 is in condition for allowance, thus the Applicants submit that dependent Claims 16-19 are also allowable.

Accordingly, early and favorable action on the pending claims is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Christopher D. Ward
Registration No. 41,367

Customer Number

22850

Tel. (703) 413-3000
Fax. (703) 413-2220

GJM:CDW:brf
I:\atty\cdw\240245US3 CONT\Pre Amend.doc